

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Application No.: 10/511,421	Confirmation No.: 4654
Applicant: PATERNOSTER, Joe	Group Art Unit: 3739
Filing Date: 10/14/2004	Examiner: ROANE, Aaron F
Docket No.: 298.41	<b>DECLARATION OF JOSEPH PATERNOSTER PURSUANT TO 37 CFR § 1.131 IN SUPPORT OF RESPONSE TO OFFICE ACTION DATED AUGUST 10, 2007  (SUBMITTED THROUGH EFS-WEB)</b>
Customer No.: 08685	
For: USE OF THERMOREGULATORY MATERIAL TO IMPROVE EXERCISE PERFORMANCE	

Dear Sir:

I, Joseph Paternoster, the named inventor of the subject matter of the rejected claims of U.S. Patent Application No. 10/511,421, as well as the President and CEO of DriWater, Inc., make the following declaration pursuant to Patent Office Rule 131 in connection with the above-identified patent application:

1. DriWater, Inc. manufactures, markets and sells DriWater® hydration product. The DriWater® product is a hydration product that may be used to transport and provide moisture to plants. It allows water and other hydrating chemicals to be stored in a solid, semi-solid or gelatinous form, typically comprising a cellulosic compound ranging from about 1% to about 3% by weight having an average molecular weight ranging between about 90,000 and about 700,000 represented by the formula: R—O—COOM, in which "M" is a metal substituted for hydrogen on said carboxyl group of the cellulosic compound and "R" is cellulosic chain; a hydrated metallic salt ranging from about 0.1% to about 0.3% by weight, and water ranging from about 97% to about 99% by weight. The DriWater® hydration product is made in factories all over the world. Part of my duties as the President and CEO of DriWater, Inc. is to oversee potential factory sites as well as oversee the building of these factories. To this end, I and one of DriWater, Inc.'s

- scientists, Harold Jensen, traveled to Egypt in 1997 to oversee the building of a factory. During this trip, we experienced extreme desert heat, causing us to dehydrate, overheat and tire. In order to counter this extreme heat, we noted that the application of DriWater® hydration product to the skin cooled us considerably. Harold had placed pieces of the DriWater® hydration product under his hat and had remarked that he felt 10-15°F cooler. Placing DriWater® hydration product against our skin enabled us to work outside longer despite the high temperature.
2. Upon return to the United States, I oversaw Harold's work to design a way to contain the DriWater® hydration product in fabric. Over the next few months, after some experimentation, Harold found that different portions (2-6 portions) of DriWater® hydration product could be applied to different areas of the body to promote cooling. Harold also found that we could also contain the DriWater® hydration product in various articles of clothing in order to keep it close to the body. Further, Harold discovered that different quantities (0.2 to 1.2 kg) of DriWater® hydration product resulted in varying amounts of cooling. I directed Harold's investigation which led to these discoveries during routine business meetings with Harold and other members of the company.
  3. This method of using the DriWater® hydration product to regulate body temperature and improve performance during exercise is the subject of the above-identified patent application. The above-identified patent application discloses a method of using DriWater® hydration product to control body heat during exercise. Specifically, the method comprises applying a thermoregulating composition of matter (such as the DriWater® hydration product) to at least one portion of a user's body, the composition of matter including: cellulosic compound ranging from about 1% to about 3% by weight having an average molecular weight ranging between about 90,000 and about 700,000 represented by the formula:  $R-O-COOM$ , in which "M" is a metal substituted for hydrogen on said carboxyl group of the cellulosic compound and "R" is cellulosic chain; a hydrated metallic salt ranging from about 0.1% to about 0.3% by weight, and water ranging from about 97% to about 99% by weight; and performing physical exertion.
  4. Even though we had our own in-house use of DriWater® hydration product and our informal experiences, we had no results from using DriWater® hydration product in a controlled laboratory setting. Using my company's contacts in Canada, I commissioned a study to be done by Brock University in St. Catharines, Ontario, Canada. Attached as

Attorney Docket No. 298.41  
Appl. No. 10/511,421

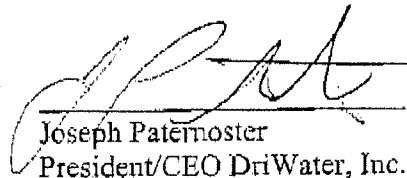
**PATENT**  
Response to Office Action of Aug. 10, 2007

- Exhibit A is a true and correct copy of the Research Agreement between Brock University and DriWater, Inc. describing the study and parties involved. The name of the study was called "Thermoregulatory Benefits of DriWater® during Exercise and in the Heat: a Pilot Study," and the Research Agreement was signed and dated on October 10, 2000. As described in the attached Exhibit A, the purpose of the Brock University study was to confirm our discovery in a controlled laboratory setting. Under my direction, DriWater, Inc. provided samples of the DriWater® hydration product for use in the Brock University study. The principal investigator, Dr. Nota Klentrou was given permission to perform our method of using DriWater® hydration product in order to test its efficacy in a controlled in environment. The results of the study were published on March 23, 2001, which was after the date of my conception of the invention and its reduction to practice.
5. After the Brock University study was published, I directed the filing of a provisional patent application disclosing the invention on October 26, 2001. Based upon our contributions, I thought that both Harold Jensen and I should be named as inventors. I believed that Harold had been named, but recently learned that he was mistakenly left off as a named inventor. This oversight was not discovered until patent counsel's investigation of the commission and publication of the Brock University Study.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment or both, under Section 1001 of Title 18, U.S.C. and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Executed on February 8, 2008 at Santa Rosa, California.

By:

  
Joseph Paternoster  
President/CEO DriWater, Inc.

## EXHIBIT A



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**Brock University**

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Research  
Services

October 18, 2000

St. Catharines, Ontario  
Canada L2S 3A1Telephone (905) 688-5550 Ext. 3127/4315  
Fax (905) 688-0748

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Mr. Joseph Paternoster  
President/CEO  
DriWater Inc.  
600 E Todd Road  
Santa Rosa, CA 95407  
USA

Re: Agreement between Brock University and DriWater Inc.

Dear Joe:

Please find enclosed a signed copy of our agreement. Dr. Klentrou has signed the acknowledgement page and is proceeding to obtain the appropriate institutional review board approvals to initiate the human participation in the study (ethics approval).

We look forward to a fruitful and exciting research partnership.

Thank you again for your efforts.

Sincerely,

Michael Owen, Ph.D.  
Director

cc: Dr. N. Klentrou

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*Careers begin here!*

3<sup>rd</sup> October 2000

**Research Agreement  
BETWEEN**

**Brock University  
500 Glenridge  
St. Catharines, ON L2S 3A1  
(Hereinafter referred to as "Brock")**

and

**DriWater, Inc.  
600 E. Todd Road  
Santa Rosa, California 95407 USA  
(hereinafter referred to as the "Company")**

**WHEREAS** The Company is committed to supporting financially the scientific research and experimental development activities of the Faculty of Applied Health Sciences at Brock; and

**WHEREAS** such research and development activities are described in Article 2;

**Now Therefore This Agreement Witnesses** that in consideration of mutual covenants and agreements herein contained, the parties hereto agree as follows:

**Article 1 - Objective**

Brock shall perform the scientific research and experimental development described in Article 2 (referred to as the "Project") upon the terms and conditions hereinafter set forth.

**Article 2 - Scope of Work**

The scope of work is described as "Thermoregulatory Benefits of DriWater during Exercise and in the Heat: a Pilot Study", (See the attached Schedule 1).

**Article 3 - Deliverable(s)**

The deliverable consists of Reports to the Company on or before the following dates:

Interim Report	1 <sup>st</sup> December 2000
Final Report	15 <sup>th</sup> February 2001

Unless Brock is notified to the contrary by the Company in writing within thirty (30) days following submission of the deliverables, these will be deemed to have been accepted by Company according to the terms and conditions of this Agreement.

**Article 4 - Principal Investigator**

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The Principal Investigator on the Project shall be Dr. Nola Klentrou, Department of Physical Education, Faculty of Applied Health Sciences.

#### **Article 5 - Basis of Payment**

In consideration of Brock carry out the Project, The Company shall pay Brock one thousand four hundred and forty dollars (\$ CDN 1440) upon signing of the Agreement.

#### **Article 6 - Limitation**

The total financial obligation of the Company is limited to one thousand four hundred and forty dollars Canadian Dollars (\$1440.00). Brock shall not be obliged to perform any work beyond the Scope of Work (see Article 2) which would cause this obligation to exceed such sum, unless Brock receives written authorization by the Company to the contrary, and Brock provides agreement through written authorization for the extension of such obligation.

#### **Article 7 - Period of Agreement**

This Agreement shall have an effective date of 1<sup>st</sup> September 2000, and shall terminate on 15<sup>th</sup> February 2001, unless such date is extended by mutual agreement in writing of Brock and the Company.

#### **Article 8 - Amendments to Agreement**

Amendments to this Agreement may be made only with the mutual consent of the parties in writing.

#### **Article 9 - Confidentiality**

The Company and Brock may disclose confidential information one to the other to facilitate work under this Agreement. All information to be deemed confidential must be marked "CONFIDENTIAL".

Such information shall be safeguarded and not disclosed to anyone without a "need to know" within the Company or Brock. Each party shall also protect such information from disclosure to third parties.

The obligation to keep confidential shall however not apply to information which:

- a) is already known to the party to which it is disclosed;
- b) becomes part of the public domain without breach of this Agreement;
- c) is obtained from third parties which have no obligations of confidentiality to either of the contracting parties; and/or
- d) is required to be disclosed by an order of a Canadian court of law.

#### **Article 10 - Publicity**

The Company will not use the name of Brock, nor of any member of Brock's staff, in any publicity without the prior written approval of an authorized representative of Brock. Brock will not use the name of the Company, the subject matter of the Project, in any publicity without the prior written approval of the Company.

Brock reserves the right to inform the Brock community of the existence of the Project along with the title of the Project and the name of the Principal Investigator.

#### **Article 11 - Publication**

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The parties agree that it is part of Brock's mission to disseminate information and to make it available for the purpose of scholarship. Brock shall be free to publish the results of the research relating to this Agreement. In any publication arising from the research, the assistance of the Company will be acknowledged unless the Company requests otherwise.

The parties agree that DriWater will have the right to publish data from this research project. In any publication by DriWater, the assistance of Brock and Dr. Nota Klentrou will be acknowledged unless Brock and Dr. Klentrou requests otherwise.

#### **Article 12 - Liability and Indemnity**

The Company agrees to indemnify and save harmless Brock, its employees, students, officers, agents, and Board of Governors, from and against any and all expenses, actions, suits, claims, demands, damages, losses, and liabilities, including attorneys' fees, suffered as the result of activities carried out by Brock, its faculty, students or staff to the research protocols as well as the applications of the research and development as described in Article 2, provided however, that the Company shall not be responsible for any liability, loss or damage arising out of:

- a. failure to adhere to proper laboratory conduct and practices by Brock employees, students or officers, or
- b. failure to comply with government safety regulations, or
- c. negligence or wilful misconduct by Brock, its employees, students or officers, or
- d. use of DriWater product in any experimental application that is outside the currently approved Scope of Work.

Brock agrees to indemnify and save harmless the Company, its employees and officers from and against any and all actions, suits, claims, demands, damages, losses, and liabilities, including attorneys' fees, arising from any willful or negligent act on the part of Brock, its employees, students or agents in performing the project.

#### **Article 13 - Non-Warranty**

Brock warrants to the Company that the Scope of Work for the Project and the deliverables specified in Article 2 shall be performed in a competent, professional manner and that any personnel involved with the Project shall have such training, skills, expertise and professional qualifications as are reasonably necessary to perform the work for the Project.

Brock shall not be responsible, and makes no warranty, expressed or implied, with respect to any actions taken by the Company in the use of research results. If the Company should decide to take action or make business decisions based on any of the research conducted by Brock as part of the Scope of Work, the implementation and results of the action shall be at the Company's own risk and not the risk of Brock.

#### **Article 14 - Notices**

Notices under this Agreement shall be sent by registered mail or delivered by hand to the following address of either party.

##### **For The Company**

DriWater, Inc  
Attention: Joseph Paternoster  
600 E. Todd Road Telephone: (707) 588-1444  
Santa Rosa, California 95407 USA Facsimile: (707) 588-1445

##### **For Brock University**

Office of Research Services Attention: Dr. Michael Owen

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Brock University  
500 Glenridge  
St. Catharines, ON L2S 3A1

Director, Research Services  
Tel: 905-688-5550 ext 3127  
Fax: 905-688-0748

#### **Article 15 - Termination**

Either party may terminate this Agreement for default or by cancellation due to circumstances as indicated herein.

In the case of default, either party may terminate this Agreement thirty (30) days after written notice of default is given to the defaulting party and if the defaulting party does not take immediate action to correct such default within such period. Default on the part of Brock may include the death or departure of the Principal Investigator and where a replacement cannot be found within a period of time that jeopardizes either the ability to provide stated deliverables.

In the case of cancellation, should contingencies arise that preclude completion of the Project, either party reserves the right to cancel the Project by giving written notice of termination sent by registered or certified mail.

In the event of termination, Brock may use the research grant or any portion remaining thereof to pay for all expenses actually incurred up to termination and for reasonable commitments made by Brock related to the Project, prior to the date of receipt of notice of termination, for which the Company is financially responsible subject to the overall financial limitation as set forth in Article 7, and in no event an amount greater than the total cost agreed upon.

#### **Article 16 - Assignment**

No right or obligation related to this Agreement shall be assigned by either party without the prior written permission of the other. While Brock shall not subcontract any work to be performed except as specifically set forth in this Agreement, Brock reserves the right to subcontract portions of the work which become impossible to perform as a direct consequence of an unforeseen circumstance. Should this occur, the Company agrees not to unreasonably withhold its permission to any assignment, provided that the assignee becomes subject to confidentiality restrictions, and other terms of this Agreement, as applicable.

#### **Article 17 - Force Majeure**

Neither party to this Agreement shall be liable to the other for any failure or delay in performance caused by circumstances beyond its reasonable control, without its fault or negligence including but not limited to, acts of God, fire, labour difficulties or governmental action.

#### **Article 18 - Severability**

In the event that any provision or part of this Agreement shall be deemed void or invalid by a Court of competent jurisdiction, the remaining provisions, or parts of it, shall be and remain in full force and effect.

#### **Article 19- Survival of Articles**

Articles 9, 10, 11, 12, and 13 shall survive the termination of this Agreement for any reason in addition to those articles surviving by operation of law. Brock shall not release any data regarding the test unless a final report is issued.

#### **Article 20 - Governing Law**

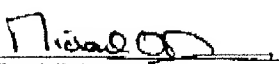
This Agreement shall be interpreted, enforced and construed according to the laws of the Province of Ontario, Canada.

**Article 21 - Entire Agreement**

This Agreement shall supersede all documents or agreements, whether written or verbal, in respect of the subject matter thereof between Brock, its Faculty members, and The Company.

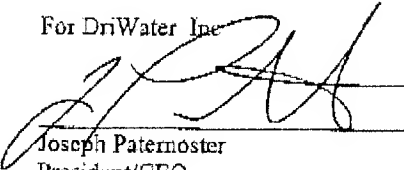
**In witness whereof the parties hereto have signed as of the effective date shown below.**

For Brock University

  
Dr. Michael Owen  
Director, Office of Research Services

Date: 10.10.00

For DriWater Inc

  
Joseph Paternoster  
President/CEO

Date: \_\_\_\_\_

**Acknowledgements****Principal Investigator**

I, Dr. Nota Klentrou, having read this Agreement, dated 4 September 2000, hereby agree to act in accordance with all the terms and conditions herein and further agree to ensure that all Brock University participants are informed of their obligations under such terms and conditions.



Dr. Nota Klentrou  
Principal Investigator

17-10-2000

Date

**Schedule 1****Statement of Work****Thermoregulatory Benefits of DriWater  
during Exercise and in the Heat: a Pilot Study****Research Proposal**

Panagiota Klentrou, PhD  
Department of Physical Education  
Brock University, St. Catharines, Ontario L2S 3A1

**Research Hypothesis**

DriWater can act as a thermoregulatory device for athletes during exercise and in the heat. With DriWater, therefore, skin and core temperature will remain closer to normal values while exercising at 80% of  $\text{VO}_2\text{max}$  for 1 hour or in sauna.

**Study Design**

This preliminary study will test 7 varsity athletes for a total of 15 in-lab sessions and 14-in sauna sessions. Subject recruitment and testing sessions will take place at Brock University as follows:

- a. Introductory visit (debriefing, consent form,  $\text{VO}_2\text{max}$ )
- b. Thermoneutral environment sessions with and without DriWater
- c. Warm environment sessions with and without DriWater

**Budget**Supplies and Materials

Rectal probes (2 boxes @ \$220)	440.00
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Personnel

Research Assistant (G. Inglis, M.Sc.)stipends	1,000.00 (500 for every 7sessions)
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TOTAL	\$ 1,440.00
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Other personnel and supplies to be provided by Brock University.

**Study Schedule**

This is a short pilot study. It is anticipated that experiments will start by the end of September and will be concluded by the end of October. Data analysis and results should be expected to be ready to review by mid November.